What is claim d is:

1. A communication system comprising:

an optical communication path;

an electrical communication path;

a controller, the controller comparing a characteristic of an optical receive signal to at least one optical threshold signal, the controller comparing a characteristic of an electrical receive signal to at least one electrical threshold signal, the controller generating a first control signal representing the comparison of the characteristic of the optical receive signal to the at least one optical threshold signal, the controller generating a second control signal representing the comparison of the characteristic of the electrical receive signal to the at least one electrical threshold signal; and

at least one switch, the at least one switch routing at least one of the optical receive signal and an optical transmit signal through at least a portion of at least one of the optical communication path and the electrical communication path in response to the first control signal without requiring user intervention, the at least one switch routing at least one of the electrical receive signal and an electrical transmit signal through at least a portion of at least one of the optical communication path and the electrical communication path in response to the second control signal without requiring user intervention.

2. A communication system as defined by Claim 1, wherein the characteristic of at least one of the optical receive signal and the electrical receive signal comprises a signal strength.

3. A communication system as defined by Claim 1, wherein the at least one optical threshold signal comprises at least one of a breakpoint reference threshold signal and a clear weather threshold signal.

4. A communication system as defined by Claim 1, wherein the at least one electrical threshold signal comprises at least one of a breakpoint reference threshold signal and a clear weather threshold signal.

5. A communication system as defined by Claim 1, wherein the at least one switch comprises:

an optical hybrid, the optical hybrid comprising a first port, a second port, and a third port, the first port of the optical hybrid being adapted to at least one of transmit the optical receive signal to a modem and receive the optical transmit signal from the modem;

an optical switch, the optical switch comprising a first port, a second port, and a third port, the second port of the optical switch being operatively coupled to the second port of the optical hybrid, the first port of the optical switch being adapted to at least one of receive the optical receive signal from an optical transceiver and transmit the optical transmit signal to the optical transceiver;

an electrical hybrid, the electrical hybrid comprising a first port, a second port, and a third port, the first port of the electrical hybrid being adapted to at least one of transmit the electrical receive signal to the modem and receive the electrical transmit signal from the modem;

an electrical switch, the electrical switch comprising a first port, a second port, and a third port, the third port of the electrical switch being operatively coupled to the third port of the electrical hybrid, the first port of the electrical switch being adapted to at least one of receive the electrical receive signal from an electrical transceiver and transmit the electrical transmit signal to the electrical transceiver; and

an electrical/optical converter, the electrical/optical converter comprising a first port, a second port, a third port, and a fourth port, the first port of the electrical/optical converter being operatively coupled to the third port of the optical hybrid, the second port of the electrical/optical converter being operatively coupled to the second port of the electrical switch, the third port of the electrical/optical converter being operatively coupled to the third port of the optical switch, the fourth port of the electrical/optical converter being operatively coupled to the second port of the electrical hybrid.

6. A communication system as defined by Claim 5, wherein the electrical/optical converter converts the optical receive signal to the electrical receive signal if the optical receive signal is to be routed through at least a portion of the electrical communication path, the electrical/optical converter converting the optical transmit signal to the electrical transmit signal if the optical transmit signal is to be routed through at least a

portion of the electrical communication path, the electrical/optical converter converting the electrical receive signal to the optical receive signal if the electrical receive signal is to be routed through at least a portion of the optical communication path, the electrical/optical converter converting the electrical transmit signal to the optical transmit signal if the electrical transmit signal is to be routed through at least a portion of the optical communication path

7. A communication system as defined by Claim 1, wherein the controller further comprises:

a first comparator, the first comparator comparing the characteristic of the optical receive signal to a first optical threshold signal, the first comparator outputting a first comparison signal representing the comparison between the characteristic of the optical receive signal and the first optical threshold signal; and

a second comparator, the second comparator comparing the characteristic of the electrical receive signal to a first electrical threshold signal, the second comparator outputting a second comparison signal representing the comparison between the characteristic of the electrical receive signal and the first electrical threshold signal.

8. A communication system as defined by Claim 7, wherein the controller further comprises:

a first flip-flop, the first flip-flop being operatively coupled to the first comparison signal, the first flip-flop outputting a first clocked signal representing the first comparison signal, the first control signal being responsive to the first clocked signal; and

a second flip-flop, the second flip-flop being operatively coupled to the second comparison signal, the second flip-flop outputting a second clocked signal representing the second comparison signal, the second control signal being responsive to the second clocked signal.

9. A communication system as defined by Claim 8, wherein the first flip-flop synchronously clocks the first clocked signal in accordance with a clock signal, the second flip-flop synchronously clocking the second clocked signal in accordance with the clock signal.

10. A communication system as defined by Claim 7, wherein the controller further comprises:

a third comparator, the third comparator comparing the first comparison signal to a second optical threshold signal, the third comparator outputting a third comparison signal representing the comparison between the first comparison signal and the second optical threshold signal; and

a fourth comparator, the fourth comparator comparing the second comparison signal to a second electrical threshold signal, the fourth comparator outputting a fourth comparison signal representing the comparison between the second comparison signal and the second electrical threshold signal.

11. A communication system as defined by Claim 10, wherein the controller further comprises:

a third flip-flop, the third flip-flop being operatively coupled to the third comparison signal, the third flip-flop outputting a third clocked signal representing the third comparison signal, the first control signal being responsive to the third clocked signal; and

a fourth flip-flop, the fourth flip-flop being operatively coupled to the fourth comparison signal, the fourth flip-flop outputting a fourth clocked signal representing the fourth comparison signal, the second control signal being responsive to the fourth clocked signal.

12. A communication system as defined by Claim 11, wherein the third flip-flop synchronously clocks the third clocked signal in accordance with a clock signal, the fourth flip-flop synchronously clocking the fourth clocked signal in accordance with the clock signal.

13. A communication system as defined by Claim 11, wherein the controller further comprises a first combinatorial gate, the first combinatorial gate combining the first clocked signal and the third clocked signal, the first combinatorial gate outputting the first control signal.

14. A communication system as defined by Claim 11, wherein the controller further comprises a second combinatorial gate, the second combinatorial gate combining the second clocked signal and the fourth clocked signal, the second combinatorial gate outputting the second control signal.

15. A communication system as defined by Claim 1, wherein the optical communication path is adapted to at least one of modulate and demodulate at least one of an on-off key, PSK, 16 QAM, 32 QAM, 64 QAM, and QPSK signal.

16. A communication system as defined by Claim 1, wherein the electrical communication path is adapted to at least one of modulate and demodulate at least one of an on-off key, PSK, 16 QAM, 32 QAM, 64 QAM, and QPSK signal.

17. A communication system as defined by Claim 1, wherein at least one of the first comparator, second comparator, third comparator, and fourth comparator comprises a combinatorial gate.

18. A method of automating a communication system comprising the steps of:

comparing a characteristic of an optical receive signal to at least one optical threshold signal;

comparing a characteristic of an electrical receive signal to at least one electrical threshold signal;

generating a first control signal representing the comparison of the characteristic of the optical receive signal to the at least one optical threshold signal;

generating a second control signal representing the comparison of the characteristic of the electrical receive signal to the at least one electrical threshold signal;

routing at least one of the optical receive signal and an optical transmit signal through at least a portion of at least one of an optical communication path and an electrical communication path in response to the first control signal without requiring user intervention; and

routing at least one of the electrical receive signal and an electrical transmit signal through at least a portion of at least one of the optical communication path and

the electrical communication path in response to the second control signal without requiring user intervention.

19. A method of automating a communication system as defined by Claim 18, further comprising the steps of:

converting the optical receive signal to the electrical receive signal if the optical receive signal is to be routed through at least a portion of the electrical communication path;

converting the optical transmit signal to the electrical transmit signal if the optical transmit signal is to be routed through at least a portion of the electrical communication path;

converting the electrical receive signal to the optical receive signal if the electrical receive signal is to be routed through at least a portion of the optical communication path; and

converting the electrical transmit signal to the optical transmit signal if the electrical transmit signal is to be routed through at least a portion of the optical communication path.

20. A method of automating a communication system as defined by Claim 18, wherein the characteristic of at least one of the optical receive signal and the electrical receive signal comprises a signal strength.

21. A method of automating a communication system as defined by Claim 18, wherein the at least one optical threshold signal comprises at least one of a breakpoint reference threshold signal and a clear weather threshold signal.

22. A method of automating a communication system as defined by Claim 18, wherein the at least one electrical threshold signal comprises at least one of a breakpoint reference threshold signal and a clear weather threshold signal.

23. A method of automating a communication system as defined by Claim 18, further comprising the steps of:

comparing the characteristic of the optical receive signal to a first optical threshold signal;

generating a first comparison signal representing the comparison between the characteristic of the optical receive signal and the first optical threshold signal;

comparing the characteristic of the electrical receive signal to a first electrical threshold signal; and

generating a second comparison signal representing the comparison between the characteristic of the electrical receive signal and the first electrical threshold signal.

24. A method of automating a communication system as defined by Claim 23, further comprising the steps of:

generating a first clocked signal by synchronously clocking the first comparison signal, the first control signal being responsive to the first clocked signal; and

generating a second clocked signal by synchronously clocking the second comparison signal, the second control signal being responsive to the second clocked signal.

25. A method of automating a communication system as defined by Claim 23, further comprising the steps of:

comparing the first comparison signal to a second optical threshold signal;

generating a third comparison signal representing the comparison between the first comparison signal and the second optical threshold signal;

comparing the second comparison signal to a second electrical threshold signal; and

generating a fourth comparison signal representing the comparison between the second comparison signal and the second electrical threshold signal.

26. A method of automating a communication system as defined by Claim 25, further comprising the steps of:

generating a third clocked signal by synchronously clocking the third comparison signal, the first control signal being responsive to the third clocked signal; and

generating a fourth clocked signal by synchronously clocking the fourth comparison signal, the second control signal being responsive to the fourth clocked signal.

27. A method of automating a communication system as defined by Claim 26, further comprising the step of generating the first control signal by combining the first clocked signal and the third clocked signal.

28. A method of automating a communication system as defined by Claim 26, further comprising the step of generating the second control signal by combining the second clocked signal and the fourth clocked signal.

29. A method of automating a communication system as defined by Claim 18, adapting the optical communication path to at least one of modulate and demodulate at least one of an on-off key, PSK, 16 QAM, 32 QAM, 64 QAM, and QPSK signal.

30. A method of automating a communication system as defined by Claim 18, adapting the electrical communication path to at least one of modulate and demodulate at least one of an on-off key, PSK, 16 QAM, 32 QAM, 64 QAM, and QPSK signal.

31. A method of automatically increasing the availability of a communication system comprising the steps of:

comparing at least one characteristic of an optical receive signal to at least one optical threshold signal;

comparing at least one characteristic of an electrical receive signal to at least one electrical threshold signal;

routing at least one of the optical receive signal and an optical transmit signal through at least a portion of at least one of an optical communication path and an electrical communication path in response to the comparison of the at least one characteristic of the optical receive signal to the at least one optical threshold signal; and

routing at least one of the electrical receive signal and an electrical transmit signal through at least a portion of at least one of the optical communication path and

the electrical communication path in response to the comparison of the at least one characteristic of the electrical receive signal to the at least one electrical threshold signal.

32. A method of automating a communication system as defined by Claim 31, further comprising the steps of:

converting the optical receive signal to the electrical receive signal if the optical receive signal is to be routed through at least a portion of the electrical communication path;

converting the optical transmit signal to the electrical transmit signal if the optical transmit signal is to be routed through at least a portion of the electrical communication path;

converting the electrical receive signal to the optical receive signal if the electrical receive signal is to be routed through at least a portion of the optical communication path; and

converting the electrical transmit signal to the optical transmit signal if the electrical transmit signal is to be routed through at least a portion of the optical communication path.